2007 Annual Report to the Public Water Access Advisory Board
Programs and Activities of the
NH Department of Environmental Services
March 2008

During 2007, DES engaged in numerous programs and activities associated with recreational opportunities and public access to the state's waters; these items are described below. DES continues to be active in its efforts to expand and improve public access opportunities across New Hampshire.

Cooperative Projects with Other Agencies/Organizations:

Public Boat Access Facility on Winnisquam Lake, Laconia – Throughout 2007, DES continued to work with the N.H. Fish & Game Department (F&G), the City of Laconia, the Public Water Access Advisory Board and the Lake Winnisquam Association to develop an access site on the Winnipesaukee River, which will provide access to Winnisquam Lake. The Winnipesaukee River Basin Program (WRBP) and the Lakes Management and Protection Programs (LMPP) within DES have been the lead DES programs providing assistance for this cooperative effort. This project has received all of the necessary permits and site construction is well underway.

DES Bureaus and Programs that Support Public Access:

Dam Bureau

The DES Dam Bureau owns and operates 113 dams, and also operates and maintains 105 dams belonging to F&G. DES provides boating recreational opportunities by regulating the water level of these controlled waterbodies. Many of these dam sites have public access facilities, which require constant maintenance, repairs and enhancements. As part of the operation plans for each of the dams, the need and the opportunities to improve public access is fully evaluated.

Maintain and Monitor Existing Lease Agreements:
DES leases properties and facilities to several communities and other agencies across the state. DES works cooperatively with towns and agencies to provide public access opportunities at these locations: Bow Lake, Strafford; Lovell Lake, Wakefield; Goshen Lake, Goshen; Oliverian Brook Flood Control Impoundment, Benton; Deering Reservoir, Deering; Milton 3 Ponds, Milton; and the Waumbek and Rowe sites on the Salmon Falls River, Milton.

Work Related to the Flood Events of Spring 2007:
DES conducted flood damage repair consisting of correcting erosion problems and replacing culverts at Pittsfield Mill Dam in Pittsfield, Whittemore Lake in Bennington, and, Pope Dam in Tuftonborough.

Site Enhancement Projects:
Due to budget constraints, the Dam Maintenance crew worked on only a few small site enhancement projects, including constructing and installing kiosks at Murphy Dam in Pittsburg and cutting brush at two of the Baker River Flood control sites in Wentworth and Warren.

Site Enhancement Crew:
Typically, the DES Dam Bureau site enhancement crew improves, develops and maintains public access at DES dam sites. Due to budget constraints, DES did not staff a site enhancement crew during the summer of 2007.

Maintenance, Repairs, and Upkeep to Existing Dams
The following activities were undertaken in 2007:
Deering Reservoir, Deering – Major reconstruction of the existing concrete spillway and flashboards.

Big Brook Bog, Pittsburg – Major reconstruction of the dam.
Sunset Lake, Alton – Installed gauging station.
Winnisquam Lake, Lochmere Dam, Tilton – Repaired the existing storage building.
Goose Pond, Canaan – Replaced the existing catwalk on the dam.

New Projects
Sawyer Lake, Gilmanton – Started the design, permitting, and funding approval process for a proposed reconstruction of the dam.

Wetlands Bureau

The bureau continues to ensure that public access is provided whenever a marina is proposed for a lake, a river, or the seacoast. The bureau has a liaison staffer who works with the F&G Public Access Program to coordinate reviews and approvals of various jurisdictional programs within DES in an effort to facilitate construction of public access sites proposed by F&G.

Watershed Management Bureau

Clean Vessel Act Program

Every year, DES requests funds from the U.S. Fish and Wildlife Service for the installation of new pumpout systems and dump stations throughout the state and to operate the mobile pumpout boat service in coastal waters. Dump stations accept only portable toilet wastes, while a pumpout system removes wastes from fixed toilets.

Coastal Waters – No new pumpout facilities were funded for the state's coastal waters during 2007, but five working pumpout stations are available to service boaters at marinas. Also, the existing mobile pumpout boat serviced 327 boats along the coast, pumping out 10,671 gallons of sewage. A new mobile pumpout boat with a larger holding tank was purchased in the fall of 2007 to pumpout seacoast area boats; it will begin service in the 2008 boating season. DES is also working with Portsmouth Harbor to identify a site for a new pumpout facility.

Inland Waters – Although no new pumpout facilities were funded for the state's inland waters during 2007, an operation and maintenance grant was awarded to Lakeport Landing Marina on Paugus Bay. DES is pursuing a pumpout facility for Lake Sunapee, which is currently serviced by a dump station.

In addition to Portsmouth Harbor and Lake Sunapee, the Clean Vessel Act Program anticipates funding other replacement systems on other waterbodies in the near future.

Boat Inspection Program

The Boat Inspection Program conducted boat inspections on Lake Winnipesaukee and Winnisquam Lake. The program conducted 63 inspections, of which 55 were first time inspections. Violations of sink and shower and/or marine sanitation device regulations were the most common violations. The major source of violations continues to be boats brought in from other states, especially those coming from the ocean. Under pressure from local marine dealers, most manufacturers modify boats destined for New Hampshire to comply with the state's No-Discharge law.

Public Beach Inspection Program

New Hampshire receives an annual EPA grant to enhance the existing Coastal Beach Program. The grant focuses on implementing and enhancing current monitoring and notification programs. New Hampshire has several goals including: 1) to identify and implement an improved beach advisory notification system; 2) to better identify sources of Enterococci (bacteria) and initiate best management practices to reduce

bacteria loading; 3) to establish a beach recognition and rewards program for public beaches that provide safe and healthy recreational experiences, and; 4) to employ recent technological advances in beach monitoring. The N.H. Coastal Beach Program is considered one of the best in the country and these grants further the state's efforts to protect public health.

DES inspected a total of 16 coastal public swimming beaches. Coastal beaches were inspected twice per week, once per week, or once every other week for a total of 309 inspections. One coastal beach advisory was issued for an exceedance of public beach water quality standards for Enterococci (bacteria).

DES inspected a total of 168 freshwater public swimming beaches on a monthly schedule for a total of 67 inspections. Thirty-one freshwater public beaches were issued for a total of 37 advisories for exceedances of the public beach water quality standards for E. coli. Eleven freshwater beaches were issued cyanobacteria advisories for the presence of a potentially toxic cyanobacteria scum. Fourteen beach advisories were issued at Ahern State Park, Laconia, as a result of a pre-emptive advisory following greater than 0.25 inches of rainfall.

Exotic Species Program
Milfoil Control Funds – DES provided milfoil grant funds to 16 organizations to chemically control the growth of exotic aquatic plants in 2007.

Milfoil and Other Exotic Plants Prevention Fund – DES issued grants to the New Hampshire Lakes Association for a Lake Host Program, to the Goose Pond Lake Association for prevention and Weed Watching activities, and to the Connecticut River Watershed Group for work in preventing the spread of milfoil throughout the Connecticut River system. One Milfoil Research Grant was awarded jointly to the Town of Barnstead Milfoil Committee and the University of New Hampshire to evaluate the effects of 2, 4-D on controlling variable milfoil in a river system.

Public Education and Outreach – DES distributed 50 milfoil signs and 20,000 educational pamphlets throughout the state. There are more than 500 volunteer Weed Watchers from across the state working in cooperation with DES on more than 250 waterbodies.

Management of Exotic Plants – DES worked in 26 waterbodies using techniques such as hand-pulling, placement of bottom barriers, harvesting, and the application of herbicides to control exotic plants.

New Infestations of Variable Milfoil – There were three new infestations of exotic aquatic plants in New Hampshire that were documented in 2007. Each new infestation was variable milfoil, which was found in Lake Pemigewasset in New Hampton, Glenn Lake in Goffstown, and Powwow Pond in Kingston.

Clean Lakes Program
Baboosic Lake, Amherst – DES is continuing to develop the draft Lake and Watershed Diagnostic Study. This report may remain as a draft due to an incomplete water budget data set.

Partridge Lake, Littleton – The Partridge Lake Diagnostic Study final report was distributed in May.

Rust Pond, Wolfeboro – The Rust Pond Diagnostic Study final report was distributed in February.

Perkins Pond, Sunapee – The draft Perkins Pond Watershed Diagnostic Study was completed in December 2006. Draft appendices were finalized in 2007. It is anticipated that the final report will be distributed in 2008.

Lake Trophic Survey Program
The Lake Trophic Survey (LTS) program was put on hold in 2007 in order to provide DES staff with time

to participate in the EPA-sponsored National Lake Assessment (NLA) Program for randomly-selected lakes. Lakes were sampled according to both NLA and LTS procedures and protocols (NLA samples were sent to contract laboratories). A total of 16 lakes were sampled: 13 randomly-selected lakes and three reference lakes. Many of these lakes have public boat access. Winnisquam Lake was one of the lakes surveyed.

Mercury in Fish Program
With assistance from the N.H. Fish and Game Department, the U.S. Fish and Wildlife Service and volunteers, 297 fish were collected from the state's lakes and ponds in 2007. The fish were frozen upon collection and analyzed for total mercury in the DES Limnology Center in late 2007 and early 2008. Many of the lakes and ponds from which the fish were collected have public access facilities.

Biomonitoring Program
DES collected macro-invertebrate samples, evaluated fish populations, and conducted habitat assessments at 20 river stations. These data are used to assess the biological health of numerous streams, which support fishing access.

Surface Water Quality Assessments
Water Quality Monitoring of Rivers – While DES has conducted biennial assessments for several years, this information is taken from the 2008 draft assessment. There are a total of 9,659 river and stream miles that need to be tested. For the "swimming" designated use, 82% of the state's river miles have not yet been assessed. Of the 18% of the river miles that have been assessed, 48% support swimming while 52% do not. For the "aquatic life support" designated use, 73% of the state's river miles have not yet been assessed. Of the 27% of the river miles that have been assessed, 4% support aquatic life while 96% do not. The majority of river segments that do not support aquatic life (60%) are due to pH values that fall below the minimum pH water quality standard of 6.5. In many cases the pH readings were just below the standard (i.e., between 6.0 and 6.5), which are not expected to result in any significant adverse impacts to aquatic life (70% of the pH impaired river segments). The source of low pH is primarily attributable to deposition of acids in the atmosphere when it rains (i.e., acid rain). The source of acidifying pollutants in the atmosphere is air emissions, primarily from fossil fuel burning power plants and motor vehicles. Since 1991, New Hampshire has taken active steps to reduce emissions from within the state. While some emissions still occur from within New Hampshire, the majority of emissions are from sources outside of the state.

Water Quality Monitoring of Lakes – While DES has conducted biennial assessments for several years, this information is taken from the 2008 draft assessment. There are a total of approximately 164,615 surface acres of lakes and ponds that need to be tested. For the "swimming" designated use, 22% of the state's surface water acres have not yet been assessed. Of the 78% of the surface water acres that have been assessed, 90% support swimming while 10% do not. For the "aquatic life support" designated use 38% of the states surface waters have not been assessed. Of the 62% that have been assessed, 0% fully support aquatic life while 100% do not. The majority of lakes that do not support aquatic life (70%) are due to pH values that fall below the minimum pH water quality standard of 6.5. In many cases the pH readings were just below the standard (i.e., between 6.0 and 6.5), which are not expected to result in any significant adverse impacts to aquatic life (81% of pH impaired lakes). The source of low pH is primarily attributable to deposition of acids in the atmosphere when it rains (i.e., acid rain). The source of acidifying pollutants in the atmosphere is air emissions, primarily from fossil fuel burning power plants and motor vehicles. Since 1991, New Hampshire has taken active steps to reduce emissions from within the state. While some emissions still occur from within New Hampshire, the majority of emissions are from sources outside of the state.

Volunteer Lake Assessment Program (VLAP)
During 2007, approximately 500 volunteers throughout the state sampled a total of 175 lakes, and 1,029 water quality monitoring stations at those lakes. In addition, it is estimated that the VLAP program generated approximately 14,000 total sample results in 2007. By sampling a lake several times each year over a period of years, long-term water quality trends can be discerned. The sampling efforts of the volunteer monitors supplement the sampling and assessment efforts of DES, saving the state personnel and travel costs. Only through the help of volunteer monitors can such a volume of sampling be accomplished throughout the state.

Volunteer River Assessment Program (VRAP)
During 2007, the VRAP program supported 29 volunteer groups. VRAP volunteers monitored 358 river and stream water quality monitoring stations, providing over 11,000 water quality parameter measurements useable for the Clean Water Act mandated water quality assessments. For many of the VRAP rivers and tributaries, the volunteers are providing DES with its only source of water quality data. As with the VLAP program, the VRAP volunteers provide the agency with high quality data while saving the state significant expense.

Rivers Management and Protection Program (RMPP)
Development of river trail and public access was identified as a goal in the Piscataquog River Local Advisory Committee's (PiRLAC) River Corridor Management Plan. RMPP staff assisted PiRLAC in developing grant applications to support a river trail system. The assistance resulted in PiRLAC receiving a technical assistance grant from the National Park Service to coordinate the creation of a recreational trail along the Piscataquog River. Construction of the 5.5 mile trail began in 2007.

The Lamprey River Local Advisory Committee (LRLAC) in cooperation with the National Park Service is developing a recreation plan and tour for the Lamprey River.

Lakes Management and Protection Program
Since the Public Water Access Advisory Board was first established in 1993, the lakes coordinator has served as the DES representative to the board. In addition to providing the PWAAB with information specific to proposed waterfront state surplus land reviews, the coordinator has continued to provide assistance to F&G and the board regarding the proposed public boat access facility on Winnisquam Lake.

NH Coastal Program
In 2007, the Coastal Program supported the Blue Ocean Society for Marine Conservation's beach cleanup programs, including the Adopt-a-Beach Program, International Coastal Cleanup Day and monthly marine debris monitoring program at Jenness Beach, helping to keep public access sites along the coast clean and more enjoyable for visitors. The ultimate goal is marine pollution prevention, which cannot be accomplished by cleanups alone. The Blue Ocean Society used data from the cleanups, along with informative educational materials developed in past projects, to better inform the public of the prevalence and impacts of marine pollution.

In 2007, the Hampton Falls Conservation Commission used a grant from the Coastal Program to acquire and protect 14 acres of land, including 320 feet along the banks of the Taylor River. The property is located next to the existing 21 acre Marsh Lane Preserve, enlarging this natural area to 35 acres. The conservation easement is held by the Southeast Land Trust of New Hampshire and allows non-motorized public access on the site.

The Coastal Program funded and coordinated the Coastal Volunteer Biological Assessment Program's 2007 season, enabling local watershed groups to collect locally important water quality data.